

LAW OFFICES  
McGuireWoods LLP  
1750 TYSONS BOULEVARD, SUITE 1800  
MCLEAN, VIRGINIA 22102

APPLICATION  
FOR  
UNITED STATES  
LETTERS PATENT

Applicants: Koichi Hatakeyama  
For: ONLINE DISTRIBUTION SYSTEM AND  
METHOD  
Docket No.: ND-384US

ONLINE DISTRIBUTION SYSTEM AND METHOD

BACKGROUND OF THE INVENTION

Field of the Invention

5           The present invention relates to an online distribution system wherein software such as a video or music is subscribed and distributed online between computers connected to each other over a circuit.

Description of the Related Art

10           In recent years, as use of digital videos has been and is increasing through a DVD recorder or a like apparatus, a software distribution service system for providing movie videos (movie software), music software and so forth online is getting popularized.

15           However, in order to utilize such a system as described above to download desired software in the form of digital data from a download terminal placed in a convenience store, a video and/or music rental shop or a like place, a user is obliged to search out a desired title from among a very large number  
20 of titles. As a result, much time is required to produce an intended medium.

SUMMARY OF THE INVENTION

25           It is an object of the present invention to provide an online distribution system and method by which the time required for a downloading procedure in a shop can be performed in a

short time.

In order to attain the object described above, according to an aspect of the present invention, there is provided an online distribution system, comprising a search server, a data  
5 distribution server, a download terminal connected to the search server through the data distribution server, and a personal terminal to which the search server is connectable, the search server including a database for storing a plurality of titles of distribution information, title search means for searching  
10 the titles stored in the database for a title designated for subscription from the personal terminal, and subscription information storage means for storing the title searched out by the title search means and identification information transmitted from the personal terminal, the data distribution  
15 server including distribution information storage means for storing the distribution information, the download terminal including identification information acquisition means for acquiring identification information inputted from the outside, first readout means for reading out, based on the identification  
20 information acquired by the identification information acquisition means, that one of the titles stored in the subscription information storage means of the search server which corresponds to the identification information, second readout means for reading out the distribution information  
25 corresponding to the title read out by the first readout means from the distribution information storage means of the data

distribution server, and recording means for recording the distribution information read out by the second readout means onto a recording medium.

5 The download terminal may further include settlement means for performing a settlement in regard to the transmission of the distribution information for the personal terminal.

10 The online distribution system may further comprise a cache server in which part of the distribution information stored in the distribution information storage means of the data distribution server is stored in advance. In this instance, the download terminal acquires, when the distribution information of the title corresponding to the identification information stored in the subscription information storage means of the search server is stored in the cache server, the  
15 distribution information from the cache server, but acquires, when the distribution information is not stored in the cache server, the distribution information from the distribution information storage means of the data distribution server.

20 According to another aspect of the present invention, there is provided an online distribution system, comprising a search server, a data distribution server, and a personal terminal connected to the data distribution server through the search server, the search server including a database for storing a plurality of titles of distribution information, title search  
25 means for searching the titles stored in the database for a title designated for subscription from the personal terminal,

and subscription information storage means for storing the title  
searched out by the title search means, the data distribution  
server including distribution information storage means for  
storing the distribution information, title acquisition means  
5 for acquiring the title stored in the subscription information  
storage means of the search server, distribution information  
readout means for reading out the distribution information  
corresponding to the title acquired by the title acquisition  
means from the distribution information storage means, and  
10 transmission means for transmitting the distribution  
information read out by the distribution information readout  
means to the personal terminal.

The data distribution server may further include  
settlement means for performing a settlement in regard to the  
15 transmission of the distribution information for the personal  
terminal.

According to a further aspect of the present invention,  
there is provided an online distribution method for an online  
distribution system wherein a download terminal is connected  
20 to a search server through a data distribution server and the  
search server is connectable to a personal terminal, comprising  
the steps performed by the search server of storing a plurality  
of titles of distribution information into a database of the  
search server, searching the titles stored in the database for  
25 a title designated for subscription from the personal terminal,  
and storing the searched out title and identification

information transmitted from the personal terminal as  
subscription information, the step performed by the data  
distribution server of storing the distribution information  
into distribution information storage means, and the steps  
5 performed by the download terminal acquiring identification  
information inputted from the outside, reading out, based on  
the acquired identification information, that one of the titles  
which corresponds to the identification information stored as  
the subscription information in the search server, reading out  
10 the distribution information corresponding to the read out title  
from the distribution information storage means of the data  
distribution server, and recording the read out distribution  
information onto a recording medium.

According to a still further aspect of the present  
15 invention, there is provided an online distribution method for  
an online distribution system wherein a personal terminal is  
connected to a data distribution server through a search server,  
comprising the steps performed by the search server of storing  
a plurality of titles of distribution information into a database  
20 of the search server, searching the titles stored in the database  
for a title designated for subscription from the personal  
terminal, and transmitting the searched out title to the data  
distribution server, and the steps performed by the data  
distribution server of storing the distribution information  
25 into distribution information storage means, reading out the  
distribution information corresponding to the title transmitted

from the search server from the distribution information storage means, and transmitting the read out distribution information to the personal terminal.

5 With the online distribution systems and the online  
distribution methods, since distribution information  
corresponding to a desired title searched out and stored using  
a personal terminal of a user itself by the user in advance  
can be distributed at any time in response to a distribution  
request of the user, the user need not perform a search for  
10 a desired title in a shop. Consequently, an advantage that  
the time required for a download procedure in the shop can be  
decreased is anticipated.

Further, since a result of the search for the title  
performed by the user is registered together with identification  
15 information of the user in the search server, when the user  
issues a distribution request for the distribution data in the  
shop, only if the user inputs the identification information,  
the distribution information can be distributed. Consequently,  
another advantage that a medium or the like on which the result  
20 of the search need not be carried is anticipated.

Where a settlement function is provided for the settlement  
function, a self-service shop can be realized. Consequently,  
a further advantage that the cost in regard to the personal  
expenditure can be reduced is anticipated.

25 Where settlement means is provided for the data  
distribution server, a settlement can be performed online.

Consequently, a still further advantage that the user need not perform a complicated procedure for payment is anticipated.

The above and other objects, features and advantages of the present invention will become apparent from the following  
5 description and the appended claims, taken in conjunction with the accompanying drawings in which like parts or elements are denoted by like reference symbols.

#### BRIEF DESCRIPTION OF THE DRAWING

10 FIG. 1 is a schematic block diagram showing a configuration of an online distribution system to which the present invention is applied.

#### DESCRIPTION OF THE PREFERRED EMBODIMENT

15 Referring to FIG. 1, there is shown an online distribution system to which the present invention is applied. A personal terminal 10 is connected to a search server 11 through the Internet 20 and transmits identification information for  
20 identification of a user and title data for indicating a title of movie or music software to the search server 11. The identification information includes a membership number set for each user and a password. The personal terminal 10 may be, for example, a computer, a WEB-accessible portable telephone terminal or the like.

25 The search server 11 includes a database which stores title data of a great number of pieces of software of movies,



music, and so forth, and is connected to the personal terminal 10 through the Internet 20. The search server 11 further stores identification information transmitted from the personal terminal 10 and the title data in a coordinated relationship.

5 The search server 11 is managed by a computer center (hereinafter referred to as "data center") installed in a dealer which sells software of movies, music and so forth, a rental shop which rents software of movies, music and so forth, or a like place.

10 The data center includes a video/music distribution server 12 connected to a private line and having an accessing function to the search server 11. The video/music distribution server 12 stores in advance a great number of video data and music data corresponding to titles of movies, music and so forth stored in the database of the search server 11 as distribution  
15 information (hereinafter referred to as "distribution data").

A cache server 13 is installed in several shops such as dealers and rental shops and is connected to the video/music distribution server 12 over a private line 21. The cache server 13 stores in advance some of the distribution data stored in  
20 the video/music distribution server 12. Some of the distribution data here signifies, for example, those video data or music data for which the demand is strong.

A download terminal 14 transmits not only a membership number and a password of a user inputted from an inputting section  
25 not particularly shown by a user to the search server 11 through the video/music distribution server 12, but also has a function

of recording distribution data transmitted from the video/music distribution server 12 onto a recording medium. The download terminal 14 is installed in various shops such as dealers and rental shops similarly to the cache server 13 and is connected  
5 to the video/music distribution server 12 over the private line 21.

In the following, operation of the online distribution system having the configuration of FIG. 1 is described.

A user will first access the database of the search server  
10 11 from the personal terminal 10 through the Internet 20 and searches for a desired title from among the title data of a large number of pieces of software of movies, music and so forth. If the desired title is searched out, then the user will designate the title and input a membership number and a password set for  
15 the user itself. The personal terminal 10 transmits the title designated by the user and the inputted membership number and password to the search server 11. The search server 11 stores the title and the inputted membership number and password transmitted thereto from the personal terminal 10.

20 Then, the user will go to a shop in which the cache server 13 and the download terminal 14 are installed, and input the membership number and the password set for the user itself to the download terminal 14. The download terminal 14 accesses the search server 11 through the video/music distribution server  
25 12 and transmits the membership number and the password to the search server 11. When the membership number and the password

are received from the download terminal 14, the search server 11 acquires a title from within the stored information based on the membership number and the password and transmits the acquired title to the download terminal 14 through the  
5 video/music distribution server 12.

The download terminal 14 thus acquires the title from the search server 11 and then accesses the cache server 13 to search whether or not distribution data corresponding to the title is stored in the cache server 13. If the distribution  
10 data corresponding to the title is stored in the cache server 13, then the download terminal 14 acquires the distribution data corresponding to the title from the cache server 13 and records the acquired distribution data onto a recording medium.

On the other hand, if video data or music data corresponding  
15 to the title is not stored in the cache server 13, the download terminal 14 accesses the video/music distribution server 12 to acquire distribution data corresponding to the title and records the acquired distribution data onto the recording medium. Consequently, moving picture information or music information  
20 of a movie, music or the like corresponding to the request of the user can be provided to the user based on the title stored in the search server 11 in advance.

The download terminal 14 may additionally have a settlement function of performing a settlement regarding  
25 provision of a recording medium. A self-service shop can thus be realized by performing a settlement through the download

terminal 14 when a recording medium having video data or music data recorded thereon is provided to a user.

Otherwise, such a settlement function as described above may be incorporated into the data distribution server 12 such  
5 that video data or music data transmitted from the video/music distribution server 12 may be transmitted directly to the personal terminal 10 without the intervention of the download terminal 14. This makes it possible for a user to acquire music or video data while the user is in its home in which the personal  
10 terminal 10 is installed.

With the online distribution system described above, since an operation for searching for a title desired by a user is performed on the personal terminal 10, the communication charge involved in the search for a title on the data center  
15 can be reduced. Further, provision of the cache server 13 can decrease the data transmission time when compared with another case wherein distribution information is received from the video/music distribution server 12.

While the distribution in the online distribution system  
20 described above is video data and/or music data, it may otherwise be a program of game software or the like. In this instance, various titles of game software are stored in the database of the search server 11 in advance.

Further, while the identification information in the  
25 online distribution system described above is a membership number and a password set for each user, it may be any other

While a preferred embodiment of the present invention has been described using specific terms, such description is for illustrative purposes only, and it is to be understood that changes and variations may be made without departing from the spirit or scope of the following claims.